

IMPACT STATEMENT
for the proposed
Maricopa County Pest Abatement District (the “Pest Abatement District”)

As required by Arizona Revised Statutes Sections 48-261 and 48-263, the following is an impact statement submitted as part of the request to create the Pest Abatement District. As such, it includes the following information required by Arizona Revised Statutes Section 48-261:

1. A legal description of the boundaries of the proposed Pest Abatement District, and a detailed map of the area to be included therein;
2. An estimate of the assessed valuation within the proposed Pest Abatement District;
3. An estimate of the change in the property tax liability of a typical resident of the proposed Pest Abatement District as a result of its creation;
4. A list and explanation of the benefits that will result from the proposed Pest Abatement District;
5. A list and explanation of the injuries that will result from the proposed Pest Abatement District;
6. The names, addresses and occupations of the proposed members of the Pest Abatement District’s organizing board of directors; and
7. An endorsing resolution adopted by the Mayor and Council of the City of Phoenix, Arizona.

Additionally, as required by Arizona Revised Statutes Section 48-2103, this Impact Statement includes certifications from the Arizona Department of Health Services and the Maricopa County, Arizona Department of Public Health with respect to the invasion of the proposed Pest Abatement District’s boundaries by the pests sought to be controlled by its creation.

A. The proposed boundaries of the Pest Abatement District.

It is proposed that the boundaries of the Pest Abatement District encompass a portion of the City of Phoenix, Arizona (the “City”), with the eastern boundary being 51st Avenue, the furthest southern boundary being Baseline Road, the western boundary being Litchfield Road and the northern boundary being Lower Buckeye Road. See Exhibit A attached hereto for the legal description of the proposed Pest Abatement District. The entire Pest Abatement District is located within Maricopa County and attached hereto as Exhibit B is a map showing the boundaries of the proposed Pest Abatement District. Portions of the St. Johns Canal and the Agua Fria, Gila and Salt Rivers will fall within the boundaries of the Pest Abatement District. Because portions of the proposed Pest Abatement District fall within the boundaries of the City,

the Mayor and Council of the City have adopted a resolution endorsing the creation of the Pest Abatement District, which is attached hereto as Exhibit C.

B. The estimated assessed valuation of the proposed Pest Abatement District.

The total Secondary Assessed Valuation for the proposed Pest Abatement District is \$668,841,711. This figure is a composite of the fiscal year 2004-05 Secondary Assessed Valuations of 10,864 parcels within the proposed Pest Abatement District, as provided by the Maricopa County Assessor's Office.

C. The estimated change in property tax liability as the result of the proposed Pest Abatement District.

The imposition of an assessment on all taxable property within the proposed Pest Abatement District for the purpose of preventing the establishment of, controlling or eradicating any pest within the proposed Pest Abatement District may not exceed fifty cents on each one hundred dollars of assessed valuation.

Sample Residential Property Calculation: Translated for the typical residential property owner within the proposed Pest Abatement District, the formula to calculate an individual residential property owner's yearly cost would be as follows:

- Step A: Multiply the full cash value of the residential property by 10%.
- Step B: Divide the value found in Step A by 100.
- Step C: Multiply the value found in Step B by \$0.50.

A typical resident within the proposed Pest Abatement District owns property with an assessed valuation of \$127,392; accordingly, the following estimates the change in the property tax liability of a typical resident as a result of the formation of the Pest Abatement District:

- Step A: $\$127,392 \times 10\% = \$12,739$
- Step B: $\$12,739 / 100 = \127.39
- Step C: $\$127.39 \times 0.50 = \63.70 (total yearly cost)

Sample Agricultural/Vacant Property Calculation: Translated for the typical agricultural or vacant property owner within the proposed Pest Abatement District, the formula to calculate an individual agricultural property owner's yearly cost would be as follows:

- Step A: Multiply the full cash value of the agricultural or vacant property by 16%.
- Step B: Divide the value found in Step A by 100.
- Step C: Multiply the value found in Step B by \$0.50.

A typical owner of agricultural or vacant property within the proposed Pest Abatement District owns property with an assessed valuation of \$32,955; accordingly, the following estimates the change in the property tax liability of a typical owner of agricultural or vacant property as a result of the formation of the Pest Abatement District:

Step A: \$32,955 X 16% = \$5,272.8
Step B: \$5,272.8/100 = \$52.73
Step C: \$52.73 X 0.50 = \$26.36 (total yearly cost)

Sample Commercial Property Calculation¹: Translated for the typical commercial property owner within the proposed Pest Abatement District, the formula to calculate an individual commercial property owner's yearly cost would be as follows:

Step A: Multiply the full cash value of the commercial property by 24.5%.
Step B: Divide the value found in Step A by 100.
Step C: Multiply the value found in Step B by \$0.50.

A typical owner of commercial property within the proposed Pest Abatement District owns property with an assessed valuation of \$78,487; accordingly, the following estimates the change in the property tax liability of a typical resident as a result of the formation of the Pest Abatement District:

Step A: \$78,487 X 24.5% = \$19,229.32
Step B: \$19,621.75/100 = \$192.29
Step C: \$196.22 X 0.50 = \$96.15 (total yearly cost)

The applicable regulations require that formation of the proposed Pest Abatement District and the assessment of taxable property within the proposed Pest Abatement District first be approved by a majority of the qualified electors of the proposed Pest Abatement District in a regular or special election held in accordance with Arizona law.

D. The benefits that will result from the proposed Pest Abatement District.

The proposed Pest Abatement District would be formed to control mosquitoes, flies, midge flies, crane flies and rodents that exist, breed and pose a threat to the residents of the proposed Pest Abatement District and their property.

1. Mosquitoes

Most individuals consider mosquitoes as a nuisance capable of ruining one's evening and leaving an uncomfortable reminder for several days after they are gone. As is shown in the following excerpts taken from information compiled by John Doll, Ph.D., from the Arizona Department of Health Services, Vector-Borne and Zoonotic Disease Section (see Exhibit D for a

¹ Prior to December 31, 2005, the assessment ratio for commercial property was 25%. Additionally, this rate will be reduced by one half of one percent annually through 2014, resulting in an assessment rate of 20% on commercial property from and after December 31, 2014.

full text of the information), mosquitoes are actually much more dangerous as they carry a number of diseases.

“Mosquitoes are the most important group of vectors (defined as an organism that transmits a disease producing microorganism) encountered by Public Health Vector Control Biologists. More time, money, and effort is spent preventing or eliminating them than all the other vectors in the State of Arizona. Any water that contains emergent vegetation or organic debris and stands long enough to permit completion of the immature stages of development can contribute to the mosquito population”

“Mosquitoes are of a concern in Arizona not only because of their annoying biting activity, but their ability to harbor and transmit several neurotropic viruses that are capable of producing disease in man and horses.”

“The mosquito-borne encephalitides are caused by viruses called ‘Arboviruses’ or Arthropod-borne Viruses’ which are picked up by mosquitoes in the blood of infected birds or animals, then replicated or multiplied in the mosquito’s salivary glands and transmitted by bite to the next susceptible host bitten by the female mosquito. In Arizona, as in most of the Southwest, we are primarily concerned with four types of encephalitis, two of which are of major distribution in the state and two of which are of limited or unknown distribution in the state. Western Equine Encephalitis and St. Louis encephalitis are the most common strains of the disease in Arizona. Both of these disease strains are transmitted by Culex mosquitoes, as is West Nile virus.”

The mosquitoes described above breed best in conditions that include emergent vegetation, shallow water, lack of wind action, organic debris, and exclusion of fish. All of these factors are present in the proposed Pest Abatement District. Aside from the shallow river bottoms of the St. Johns Canal, Agua Fria River, Gila River and Salt River, the proposed Pest Abatement District contains numerous dairy farms.

According to studies performed by the Maricopa County Vector Control (Tres Rios and Holley Acres) within the proposed Pest Abatement District:

* Nearly 94,792 mosquitoes were identified from 20 traps from July 2003 through December 2003. Of these mosquitoes, 39.28% were of the Culex species, which can transmit encephalitis and the West Nile Virus. See Exhibit E.

* Nearly 10,266 mosquitoes were identified from the same 20 traps from January 2004 through June 2004. Of these, 63.45% were of the Culex species, which can transmit encephalitis and the West Nile Virus. See Exhibit F.

* Maricopa County Vector Control mosquito information for the year 2004 in the proposed Pest Abatement District is as follows:

1. Fogged 4,250 acres for adult mosquitoes.

2. Collected positive pools of mosquitoes with West Nile Virus on June 6, 2004 at 107th Avenue and Southern, 115th Avenue and Indian Spring and 75th Avenue and Baseline.
3. Collected positive pools of mosquitoes with West Nile Virus on June 15, 2004 at 91st Avenue and River Bottom.

* Vector Control conducts routine visits at 24 sites within the proposed Pest Abatement District.

* The above traps only draw mosquitoes from a 400 to 600 foot diameter.

* Viruses that cause encephalitis and the West Nile Virus were present in the trapped mosquitoes.

* The presence of encephalitis has also been identified in sentinel chickens residing in the proposed Pest Abatement District. Infected birds are prime hosts for mosquitoes.

2. Flies, Midge Flies and Crane Flies

The common house fly and other breeds of flies are considered an annoying and dirty pest. Flies are general feeders that are attracted to a wide variety of substances from foods to excrement. The proposed Pest Abatement District contains many of the conditions that contribute to the breeding of flies. As shown on Exhibit G, flies breed best in areas of waste and decay and prefer host materials such as manure, garbage, decaying plant waste, decaying animal carcasses. Flies can only feed on liquids, and must regurgitate their food in order to liquefy it. A house fly excretes and regurgitates whenever it comes to rest. This habit, combined with its body hair and bristles make it an ideal candidate for transmitting diseases. According to www.pestworld.org,

“House flies have been shown to harbor over 100 different kinds of disease causing pathogens, many of which are associated with filth. Such pathogens include those causing typhoid fever, cholera, diarrhea, dysentery, tuberculosis, anthrax, ophthalmia, polio, and salmonellosis, as well as parasitic worms. They have been shown to be disease pathogen transmitters via their vomit, feces, and contaminated external body parts.”

The midge fly, crane fly, stable fly and blow fly are present in the proposed Pest Abatement District. The midge fly is a gnat-like insect and comes in both the biting and non-biting variety. The midge fly collect in very large populations and can create much annoyance by accumulating in hanging laundry, screens and freshly applied paint. Biting midge flies leave bites that cause itching and, in sensitive individuals, welts and lesions. Crane flies resemble giant mosquitoes. They feed on live plants and decaying vegetable matter, and can cause damage to turf and pasture. Stable flies, which are common around dairies, tend to bite dogs, and blow flies are bothersome to horses.

It is apparent from these statistics that the proposed Pest Abatement District (i) is indeed suffering from the presence of mosquitoes known to carry the encephalitis causing viruses and

(ii) contains all the factors that promote mosquito and fly breeding. The failure to control the mosquito and fly populations could be disastrous.

The proposed Pest Abatement District also contains the normal occurrence of rodents, including, but not limited to, rats and mice. Rodents can be economically injurious, destroying crops and stored foods. Rodents such as mice and rats sometimes carry diseases adding to the danger to humans and animals.

The creation of the proposed Pest Abatement District would enable the residents of the area to raise the revenues necessary to control the mosquito, fly, midge fly, crane fly and rodent populations, which would help in (i) reducing the possibility of humans and animals being infected with the diseases these pests may be carrying, (ii) reducing the population of pests which may be harmful to crops and other vegetation and (iii) reducing the nuisance caused by the above described pests.

3. Certifications.

Attached hereto as Exhibit H are certifications from the Arizona Department of Health Services and the Maricopa County, Arizona Department of Public Health regarding the presence of mosquitoes within the boundaries of the proposed Pest Abatement District, as required by Arizona Revised Statutes Section 48-2103.

E. Injuries resulting from the proposed Pest Abatement District.

The only known injuries which would result from the imposition of the proposed Pest Abatement District would be the assessment levied at the rate of not to exceed fifty cents per one hundred dollars of the Secondary Assessed Valuation on the property located within the boundaries of the proposed Pest Abatement District, as calculated in Section C of this Impact Statement.

F. The names, addresses & occupations of the proposed members of the Pest Abatement District's organizing board of directors.

The organizing members of the board of directors for the proposed Pest Abatement District are:

1. Adron W. Reichert
6402 South 107th Avenue
Tolleson, Arizona 85353
Occupation: Farmer
2. David G. Walker
P.O. Box 634
Tolleson, Arizona 85353
Occupation: Retired
3. Glenda J. Farmer
6038 South Avondale Blvd.
Tolleson, Arizona 85353
Occupation: School Teacher

4. Renee R. Farmer
6227 South 122nd Avenue
Tolleson, Arizona 85353
Occupation: School Teacher

5. Don Hauser
10253 West Southern
Tolleson, Arizona 85353
Occupation: Custom Farmer

Respectfully submitted,

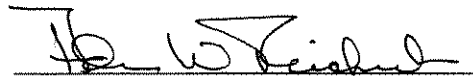

Adron Reichert

EXHIBIT A
LEGAL DESCRIPTION OF PROPOSED PESTABATEMENT DISTRICT
OF MARICOPA COUNTY]

1. That part of Sections 19, 20, 29, 30, 31, and 32, in Township 1 North, Range 2 East, and that part of Sections 19, through 36, inclusive, in Township 1 North, Range 1 East, and that part of Sections 22, 23, 24, 25, 26, 27, 34, 35 and 36, in Township 1 North, Range 1 West, all in the G&SRB&M, Maricopa County, Arizona, described as follows:
2. BEGINNING at the Northeast corner of Section 20 in Township 1 North, Range 2 East, being in the vicinity of the intersection of the monument lines of Lower Buckeye Road and 51st Avenue;
3. thence Southerly along the East line of said Section 20 in Township 1 North, Range 2 East, and along the East lines of Sections 29 and 32 in last said Township and Range, to the Southeast corner of Section 32 in the last said Township and Range;
4. thence Westerly along the South line of Section 32 and Section 31 in Township 1 North, Range 2 East, to the Southeast corner of Section 36 in Township 1 North, Range 1 East;
5. thence Westerly along the South line of said Section 36 in Township 1 North, Range 1 East, and along the South line of Section 35 in the last said Township and Range, to its intersection with the Gila River Indian Reservation Boundary;
6. thence generally Westerly along said Boundary to its intersection with the East line of Section 36 in Township 1 North, Range 1 West, also being a point on the Northeast corner of the Southeast quarter of the Southeast quarter of Section 36 in the last said Township and Range;
7. thence Westerly along the North line of the South half of the South half of Section 36 in Township 1 North, Range 1 West to the Northeast corner of the Southwest quarter of the Southwest quarter of Section 36 in the last said Township and Range;
8. thence Northerly to the Northeast corner of the Northwest quarter of the Southwest quarter of Section 36 in Township 1 North, Range 1 West;
9. thence Westerly to the east line of Section 35 in Township 1 North, Range 1 West;
10. thence Westerly to the east line of Section 34 in Township 1 North, Range 1 West;
11. thence Westerly to a point 75 feet East of the West line of Section 34 in Township 1 North, Range 1 West;
12. thence Northerly to the intersection of the South line of Section 27 in Township 1 North, Range 1 West;
13. thence Northerly to a point 10 feet South of the North line of the Southwest quarter of Section 27 in Township 1 North, Range 1 West;
14. thence Easterly to the East line of Section 27 in Township 1 North, Range 1 West;

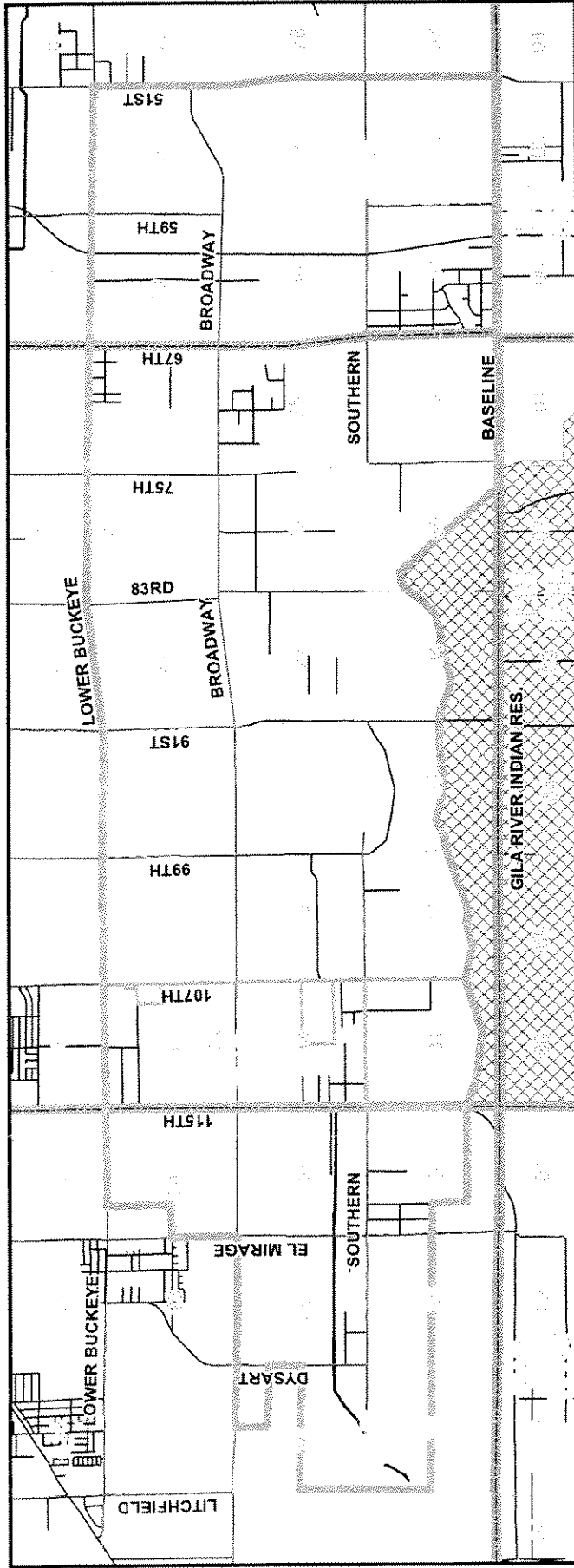
1. thence Northerly to the Southeast corner of the Northeast quarter of the Northeast quarter of Section 27 in Township 1 North, Range 1 West;
2. thence Westerly to a point 10 feet East of the West line of the Northeast quarter of Section 27 in Township 1 North, Range 1 West;
3. thence Northerly to a point on the South line of Section 22 in Township 1 North, Range 1 West, 10 feet East of the midsection line of the Section 22 the last said Township and Range;
4. thence Easterly to the East line of Section 22 in Township 1 North, Range 1 West;
5. thence Easterly to the West line of Section 24 in Township 1 North, Range 1 West;
6. thence Northerly to the Southwest corner of the Southwest quarter of the Northwest quarter of Section 24 in Township 1 North, Range 1 West;
7. thence Easterly to the Southeast corner of the Southwest quarter of the Northwest quarter of Section 24 in Township 1 North, Range 1 West;
8. thence Northerly to the North line of Section 24 in Township 1 North, Range 1 West;
9. thence Easterly along the North line of Section 24 in Township 1 North, Range 1 West to the East line of Section 24 in the last said Township and Range;
10. thence Easterly along the North line of Section 19, 20, 21, 22, 23, and 24 in Township 1 North Range 1 East to the Northeast corner of said Section 24 in Township 1 North, Range 1 East;
11. thence Easterly along the North line of Section 19 and Section 20 of Township 1 North Range 2 East, to the Northeast corner of said Section 20 in the last said Township and Range to the POINT OF BEGINNING;

1. **The following properties and areas are eliminated from the Proposed District, but are located within the overall Proposed District Boundary described above. (Current as of 3/8/05, City of Avondale, AZ City Clerks Office) It is the intention of the Proposed District Committee that no properties owned and/or governed by the City of Avondale, or which are right-of-way of the City of Avondale are part of the Proposed District.**
2. City of Avondale Strip Annex, Avondale City Ordinance 240, in Township 1 North, Range 1 East, Sections 19, 20, 30, 25 & 36 and in Township 1 North , Range 1 West, Section 24 and 25, generally described as:
3. The East 65 feet of the North 58 feet of Section 24; EXCEPT the East 40 feet of the North 33 feet thereof in Township 1 North, Range 1 West;
4. The South 25 feet of the North 58 feet of Section 19 in Township 1 North, Range 1 East; EXCEPT the East 33 feet thereof; The West 25 feet of the East 58 feet of Section 19 in Township 1 North, Range 1 East; EXCEPT the North 33 feet thereof;
5. The West 25 feet of the East 58 feet of Section 30 in Township 1 North, Range 1 East; EXCEPT the South 33 feet thereof; The North 25 feet of the South 58 feet of Section 30 in Township 1 North, Range 1 East; EXCEPT the East 33 feet thereof;
6. The East 58 feet of the South 58 feet of Section 25 in Township 1 North, Range 1 West; EXCEPT the East 33 feet of the South 33 feet thereof in Township 1 North, Range 1 West;
7. The West 25 feet of the East 58 feet of Section 36 in Township 1 North, Range 1 East; The East 33 feet of the South 25 feet of Section 36 in the last said Township and Range;
8. The West 25 feet of the South 65 feet of Section 36 in Township 1 North ,Range 1 East; and the West 25 feet of the East 58 feet of Section 36 in the last said Township and Range; the East 33 feet of the South 25 feet of Section 36 in the last said Township and Range;
9. City of Avondale Strip Annex Avondale City Ordinance in Township 1N, Range 1E, Sections 19, 30 and 31 to the intersection with the Gila River Indian Reservation Boundary, generally described as:
10. The West 10 feet of the East 43 feet of the North 33 feet of the Northeast quarter of Section 19 in Township 1N, Range 1E;
11. The West 10 feet of the East 43 feet of the South 33 feet of the Southeast quarter of Section 30 in Township 1N, Range 1E;
12. The West 10 feet of the East 43 feet of Section 31 in Township 1N, Range 1E except that portion lying within the Gila River Indian Reservation;



1. **City of Avondale Municipal Governed Properties Area 1 starting from:**
2. Southeast corner of Maricopa County Assessors Office Parcel Number 101-41-001H in Section 30 in Township 1 North, Range 1 East;
3. thence Northerly to the Southeast corner of Maricopa County Assessors Office Parcel Number 101-42-001E in Section 30 in Township 1 North, Range 1 East;
4. thence Westerly to the Southwest corner of Maricopa County Assessors Office Parcel Number 101-42-001D in Section 30 in Township 1 North, Range 1 East;
5. thence Southerly to the Southwest corner of Maricopa County Assessors Office Parcel Number 101-41-001G in Section 30 in Township 1 North, Range 1 East;
6. thence Easterly to the Southeast corner of Maricopa County Assessors Office Parcel Number 101-42-001H in Section 30 in Township 1 North, Range 1 East;
7. **City of Avondale Municipal Governed Properties Area 2 starting from:**
8. Southeast corner of Maricopa County Assessors Office Parcel Number 101-22-254 in Section 19 in Township 1 North, Range 1 East;
9. thence Westerly to the Southwest corner of Maricopa County Assessors Office Parcel Number 101-22-254 in Section 19 in Township 1 North, Range 1 East;
10. thence Northerly to the Northwest corner of Maricopa County Assessors Office Parcel Number 101-22-005K in Section 19 in Township 1 North, Range 1 East;
11. thence Easterly to the Northeast corner of Maricopa County Assessors Office Parcel Number 101-22-233A in Section 19 in Township 1 North, Range 1 East;
12. thence Southerly to the Southeast corner of Maricopa County Assessors Office Parcel Number 101-22-254 in Section 19 in Township 1 North, Range 1 East;
13. **City of Avondale Municipal Governed Properties Area 3 starting from:**
14. Southeast corner of Maricopa County Assessors Office Parcel Number 101-22-234C in Section 19 in Township 1 North, Range 1 East;
15. thence Westerly to the Southwest corner of Maricopa County Assessors Office Parcel Number 101-22-234C in Section 19 in Township 1 North, Range 1 East;
16. thence Northerly to the Northwest corner of Maricopa County Assessors Office Parcel Number 101-22-234C in Section 19 in Township 1 North, Range 1 East;
17. thence Easterly to the Northeast corner of Maricopa County Assessors Office Parcel Number 101-22-234C in Section 19 in Township 1 North, Range 1 East;
18. thence Southerly to the Southeast corner of Maricopa County Assessors Office Parcel Number 101-22-234C in Section 19 in Township 1 North, Range 1 East;

EXHIBIT B
MAP OF PROPOSED DISTRICT

Exhibit B Map of Proposed Pest Abatement District of Maricopa County



Key

-  Proposed District Boundary
-  Township-Range Section



Rev. 09/27/05

EXHIBIT C

ENDORSING RESOLUTION OF THE CITY OF PHOENIX, ARIZONA

RESOLUTION NO. 20259

A RESOLUTION OF THE CITY COUNCIL OF PHOENIX, ARIZONA ENDORSING THE CREATION OF THE PEST ABATEMENT DISTRICT IN WESTERN MARICOPA COUNTY AND REQUESTING THAT CERTAIN PROPERTY LOCATED WITHIN THE CITY BE INCLUDED IN THE PEST ABATEMENT DISTRICT IN WESTERN MARICOPA COUNTY.

WHEREAS, certain residents of Maricopa County desire the creation of a pest abatement district to control and eradicate mosquitoes, flies, midge flies, crane flies and rodents that exist, breed and pose a threat to its residents and their property; and

WHEREAS, such residents have, pursuant to Arizona Revised Statutes Section 48-263.A, prepared an Impact Statement (a copy of which is attached hereto as **Exhibit A**) describing the proposed Pest Abatement District in Western Maricopa County (the "Pest Abatement District") and will submit such Impact Statement to the Maricopa County Board of Supervisors (the "Board"); and

WHEREAS, Arizona Revised Statutes Section 48-263.A (by cross reference to Arizona Revised Statutes Section 48-261.E) requires that if a proposed pest abatement district includes property located within an incorporated city, the Board can approve the creation and authorize the circulation of petitions with respect thereto only if the governing body of such city has by resolution endorsed such creation; and

WHEREAS, if the circulation of petitions is authorized, Arizona Revised Statutes Section 48-2102.A requires that if part of the territory of the proposed pest abatement district is within the corporate limits of an incorporated city, the petition must include a resolution of the governing body of such city requesting that the territory located within the corporate limits be included within the proposed pest abatement district; and

WHEREAS, the Pest Abatement District will include property located within the City of Phoenix (the "City"); and

WHEREAS, the City's endorsement of the Pest Abatement District is based on the assumption that under Arizona law, and the Arizona Constitution, any City owned property located in the Pest Abatement District will not be subject to assessment by the Pest Abatement District; and

WHEREAS, the Board will not consider approving the Impact Statement and authorizing the persons proposing the Pest Abatement District to circulate petitions for the creation of the Pest Abatement District until it has received evidence that the City Council, as the governing body of the City, has endorsed the creation of the Pest Abatement District and requested that the territory located within its corporate limits be included therein; and

WHEREAS, the Mayor and Council of the City deem it appropriate to endorse the creation of the Pest Abatement District and to request the certain property located within the City be included within the Pest Abatement District.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF
THE CITY OF PHOENIX, AS FOLLOWS:

SECTION 1. The Mayor and Council of the City hereby endorse the creation of
the Pest Abatement District described in the Impact Statement attached hereto as
Exhibit A.

SECTION 2. The Mayor and the Council hereby request that the territory
described in **Exhibit B** hereto be included in the proposed Pest Abatement District.

PASSED, ADOPTED AND APPROVED by the Mayor and Council of the City of
Phoenix this 1st day of June, 2005.



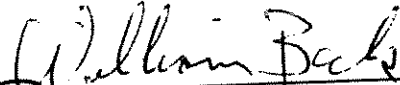
MAYOR

ATTEST:



City Clerk

APPROVED AS TO FORM:



Acting City Attorney

REVIEWED BY:



City Manager

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BWS/dmf/180707_1
05/26/04; CM#119

2005 JUN 31 PM 3:58
CITY CLERK DEPT.

EXHIBIT D

ADDITIONAL INFORMATION ON MOSQUITOES AND FLIES WITHIN THE PROPOSED PEST ABATEMENT DISTRICT

The enclosed information, compiled by John Doll, Ph.D from the Arizona Department of Health Services, Vector-Borne and Zoonotic Disease Section, contains information pertaining to the mosquitoes and flies that exist in the proposed Pest Abatement District.

The control of these flying insects helps to lower the possibility of humans and animals being infected with the diseases they carry.

Additional enclosed information has been obtained from the City of Phoenix, Tres Rios and Maricopa County Vector Control and contains trap locations, count per trap, types of mosquitoes found at each location and percentage of those that were potential disease transmitters within the proposed Pest Abatement District boundaries.

MOSQUITOES

I. INTRODUCTION

Mosquitoes are the most important group of vectors encountered by Public Health Vector Control Biologists. More time, money, and effort is spent preventing or eliminating them than all the other vectors in the State of Arizona. Any water that contains emergent vegetation or organic debris and stands long enough to permit completion of the immature stages of development can contribute to the mosquito population. Human intrusion into the country with farms, golf courses and subdivisions has not diminished the mosquito problem. In fact, urbanization generally brings with it an increased vector problem due to a variety of newly created mosquito habitats and the proximity of human populations.

Mosquitoes are of a concern in Arizona not only because of their annoying biting activity, but their ability to harbor and transmit several neurotropic viruses that are capable of producing disease in man and horses.

II. IMPORTANCE

The importance of mosquitoes to man's existence cannot be limited to its disease transmitting abilities. The bites of the female mosquito, which is the only sex that takes blood, are a very real problem to many persons.

Livestock are greatly bothered by mosquito bites, and also are responsible for contributing new breeding sites by tracking through marshy ground. Several mosquito species utilize the hoofprints for larval breeding sites.

A. BITES

When a mosquito bites, it secretes saliva containing an anti-coagulant into the wound. The anticoagulant prevents blood clotting and acts as a proteinaceous foreign antigen to the animal's immune system. Initial reaction to the foreign substance is an itching and reddening followed by swelling of the site. Scratching of the bite may often result in secondary infection of the wound.

B. DISEASES

1. ENCEPHALITIS

In Arizona, disease transmission by mosquitoes is primarily limited to four types of encephalitis. The term encephalitis means "inflammation of the

brain" which characterizes the type of symptomology that shows up when a human (or in some cases, a horse) is infected with a certain virus. Not all types of encephalitis causing viruses are arthropod-borne.

The mosquito-borne encephalitides are caused by viruses called 'Arboviruses' or 'Arthropod-borne Viruses' which are picked up by mosquitoes in the blood of infected birds or animals, then replicated or multiplied in the mosquito's salivary glands and transmitted by bite to the next susceptible host bitten by the female mosquito. In Arizona, as in most of the Southwest, we are primarily concerned with four types of encephalitis, two of which are of major distribution in the state and two of which are of limited or unknown distribution in the state. Western Equine Encephalitis (WEE) and St. Louis Encephalitis (SLE) are the most common strains of the disease in Arizona and usually show up in human populations in that period from July through late fall. The end of the encephalitis season for any one area corresponds to a couple of weeks or so after heavy frost.

In the case of human involvement, it is important to remember that the event in question, a mosquito bite that initiated the disease, occurred many days, even weeks, before the case was recognized and was possibly many miles away. The services of an epidemiologist, one who studies disease, are greatly needed to establish the pattern of the disease.

The reader will note that in the names of the two mentioned diseases, Western Equine Encephalitis and St. Louis Encephalitis, the former includes the word "Equine" (referring to horse) while the latter does not. This is because WEE can also infect horses, showing typical neurologic symptoms, not unlike those found in humans. With SLE, even though the horse may become infected by the disease agent, it does not show symptoms. Thus, only with WEE may one expect to find horse cases preceding or occurring with human cases. Both of these disease strains are transmitted by Culex mosquitoes (Culex tarsalis, being the most accepted primary vector, followed in importance by Culex pipiens quinquefasciatus). All Culex breed in characteristic habitats.

The other types of mosquito-borne encephalitis that may occur in Arizona include Venezuelan Equine Encephalitis (VEE) and California Encephalitis (CE). Both of these viruses have been discovered in either surrounding states or in Mexico but thus far have limited or no known occurrence in Arizona. Unlike the two most important types of encephalitis, WEE and SLE, which have birds as natural reservoirs, VEE and CE arboviruses have mammalian hosts. Other Arbovirus strains may become important to the state as research continues.

To summarize the vital details of arboviruses:

1) There is more than one type of arbovirus transmitted by mosquitoes, 2) The viruses are sub-microscopic, and 3) Arboviruses need living vectors to transmit them. The epidemiology and control of arbovirus encephalitis are tied to vector ecology.

2. MALARIA

Malaria is a disease caused by protozoans of the genus Plasmodium. It is a disease transmitted from man to man by Anopheles mosquitoes. Although there is evidence that Malaria has been important in Arizona in its early history, and sporadically since then, the present potential for massive vector transmission in the state is questionable. The mosquito species Anopheles freeborni is known to occur in most Arizona counties, giving them some vector capability for malaria. For an outbreak there must be a human with an available pool of malaria parasites in the correct stage of development to be picked up by the mosquito. Most cases of Malaria in the state during the last decade have proven to be recurrent fever from past foreign infection, or recently arrived travellers in countries where malaria is still a critical health problem. Such patients are usually under medication and their availability to vectors as hosts for malaria is limited. There has been proven "needle" transfer by drug users overseas.

It is good to point out that the first law of vector control is not to try 'outguessing vectors'. One must distinguish between possibility and probability. Since Arizona has the vector and the susceptible population, the circle may be completed by the introduction of an infected person carrying malaria (this has occurred in California), thus creating the possibility of malaria transmission in

VII. CONTROL

No attempt will be made in this manual to identify specific materials and rates of application, since they are subject to frequent change. Instead, the techniques of control will be discussed.

A. INTEGRATED PEST MANAGEMENT (IPM)

The principle of control of mosquitoes does not involve any one method, be it chemical, biological, or water management, but a combination of factors harmonious with each other, tuned to the particular situation and compatible with each other and the environment. Larval source reduction involves one of our most fragile commodities, surface water. Special care must be undertaken in effecting such control.

B. BIOLOGICAL CONTROL

Biological control of mosquitoes is the oldest but one of the least researched of all control methods. Insect predators, birds such as the purple martin, insect predators like dragon flies, fish such as the top minnow, and even microorganisms have been variously hailed as the ultimate mosquito control weapon.

All biological controls thus far tested have limitations. The only strictly biological measure of consequence in Arizona is the use of fish, principally of the top feeding type and limited largely to the mosquito fish Gambusia affinis and the Gila topminnow, Poeciliopsis spp. Even within this biological control group there lies a difficulty. The Gambusia species is much more vigorous in its habitat than the native Gila topminnow and overcompetes to the point that the latter species is crowded out. Since Poeciliopsis spp. is a threatened native, it is on the "endangered species" list and as such will carry the full protection afforded it by the 'Endangered Species Act of 1973'. The operational effect of this is that, even now, waters bearing native Gila topminnows should not be seeded with Gambusia affinis in the State of Arizona. To determine which waters are known to harbor this native fish it is best to check with the non-game fisheries specialist of the Arizona Department of Game and Fish. Basically, Gambusia affinis and, to a somewhat lesser extent, Poeciliopsis are very efficient larvavores and where the breeding site does not dry up and where vegetation does not limit their penetrability, they are the only control that is required.

C. WATER MANAGEMENT

The basis of water management for mosquito control is either to remove the water (source reduction) or to modify it so that it is no longer suitable for production. Removal of water by drainage is ideal for unimportant temporary rainpools and in drying up irrigation spillage, but drying up of natural water accumulations such as marshes, swamps, and shallow lakes is subject to laws of several agencies.

Remember that there are certain conditions that promote mosquito breeding. These include emergent vegetation, shallow water, lack of wind action, organic debris, and exclusion of fish. Careful study and manipulation of these factors along with introduction of fish has enabled many mosquito breeding sites to be effectively altered to the mutual benefit of both wildlife and mosquito control concerns. Ditches to allow natural fish access to remote pools may replace drainage of these sites. Water level adjustment to control emergent vegetation types has greatly reduced mosquito breeding in certain cases while promoting even better vegetation for shore dwelling wildlife.

The possibilities are virtually unlimited for water management. Inherent to the water management of mosquito pests there are two major difficulties: 1) This method often involves the use of major pieces of equipment and elaborate planning for alteration of extensive surface water conditions. 2) Traditionally, there has been a lack of productive communication between wildlife interests and mosquito control personnel. Fortunately, the latter barrier is slowly giving way before the efforts of research and integrated interest groups but much more public relations effort is needed in this field.

D. CHEMICAL CONTROL

Chemical control of mosquitoes should be designed so that major emphasis is placed on the larval sources. By simple mathematics it can be seen that the amount of acreage that breeds mosquitoes is a mere fraction of that over which adults will disperse. From the standpoint of cost as well as the environment, larval breeding sites should be considered carefully for pesticide treatment.

Chemical control of larvae can be accomplished with special oils applied thinly over the surface of the water by spreader additives. These simple pesticides

enter the air tubes of the mosquito larvae and both suffocate and poison the insect. Various formulations of Bacillus thuringiensis israeliensis (B.T.I) spores are also available. These spores contain an endotoxin which, when ingested, destroys the gut of the mosquito larvae. The B.T.I.'s are relatively safe, inexpensive and environmentally accepted materials when used as directed. Where more stringent methods are needed, pesticides may be added to the oil, or water soluble formulations may be applied at label recommendations to kill the larvae by contact and ingestion. One important difference occurs between the oil and water soluble formulations. In the latter, volume of the habitat becomes much more critical and, consequently, there is often a need to increase the actual amount of pesticide applied per acre since dosage rate depends upon volumetric rather than surface area proportions. The average depth of water is necessary to calculate volume, and is a difficult thing to determine in many instances.

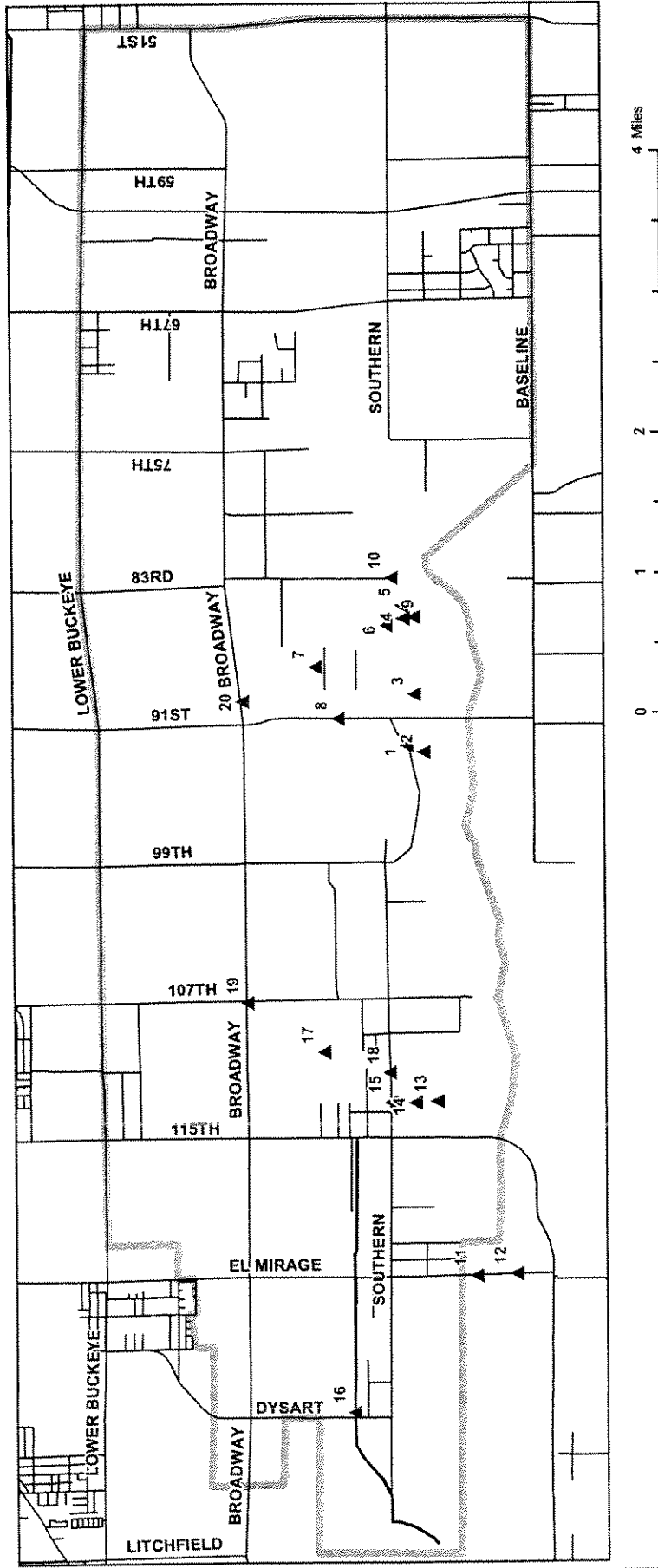
Adult control depends largely upon the application of aerosol insecticide formulations over large areas of the environment. This is likely to be admixed into human population centers and will require repeated applications, since invasion from untreated peripheral areas will most surely occur.

Depending upon the size of the aerosol generated (from a spray to a dry fog), drift becomes an increasing problem, as does evaporation of the pesticide droplet.

EXHIBIT E

**MOSQUITO MONITORING SUMMARY REPORT
JULY 2003 – DECEMBER 2003**

Exhibit E Proposed Pest Abatement District of Maricopa County Adult Mosquito Trap Locations



Key

Proposed District Boundary

Adult Mosquito Trap Locations

MOSQUITO MONITORING SUMMARY REPORT JULY-DECEMBER 2003

TRES RIOS DEMONSTRATION CONSTRUCTED WETLAND

Site No.	Description	Count	Date
1	North of effluent channel, 500 ft downstream of 91 st Avenue	3202	08/21/03
2	Between Cobble Site Basins 1 & 2	2434	
3	South fence line at Research Site	867	
5	East of Hayfield Site in Salt R. bottom	367	
7	North perimeter fence line of 91st Ave. WWTP (adjacent to Stump property)	9649	
8	North perimeter fence along 91 st Ave., north of admin. Bldg.	331	
10	North bank of Salt R. and 83 rd Ave.	482	08/26/03
1	north of effluent channel, 500 ft downstream of 91 st Avenue	198	
2	Between Cobble Site Basins 1 & 2	251	
5	East of Hayfield Site in Salt R. bottom	207	
8	North perimeter fence along 91 st Ave., north of admin. Bldg.	316	
10	North bank of Salt R. and 83 rd Ave.	112	
2	Between Cobble Site Basins 1 & 2	103	08/28/03
3	South fence line at Research Site	343	
8	North perimeter fence along 91 st Ave., north of admin. Bldg.	1104	
1	North of effluent channel, 500 ft downstream of 91 st Avenue	169	09/04/03
3	South fence line at Research Site	162	
5	East of Hayfield Site in Salt R. bottom	230	
6	North perimeter fence of Hayfield Site	124	
8	North perimeter fence along 91 st Ave., north of admin. Bldg.	345	
10	North bank of Salt R. and 83 rd Ave.	104	

MOSQUITO MONITORING SUMMARY REPORT JULY-DECEMBER 2003

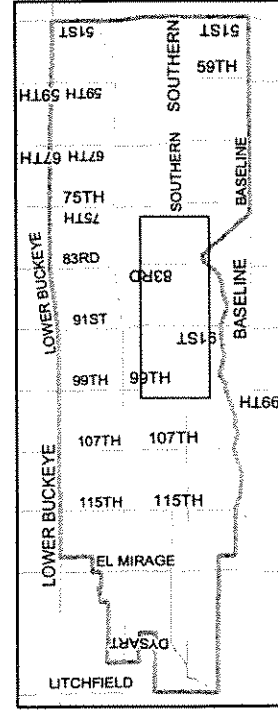
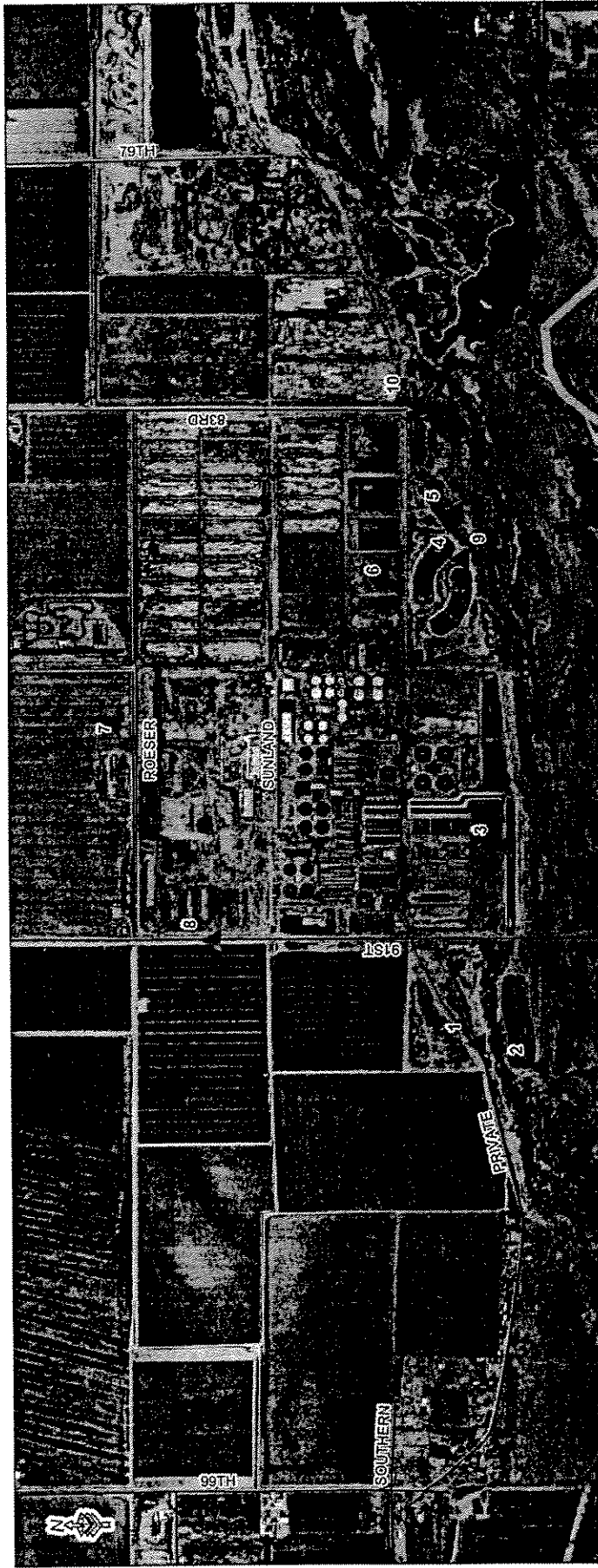
TRES RIOS DEMONSTRATION CONSTRUCTED WETLAND

Site No.	Description	Count	Date
8	North perimeter fence along 91 st Ave., north of admin. Bldg.	1300	09/11/03
1	north of effluent channel, 500 ft downstream of 91 st Avenue	165	09/17/03
2	Between Cobble Site Basins 1 & 2	349	
3	South fence line at Research Site	170	
4	Picnic table on east side of Hayfield Site	224	
5	East of Hayfield Site in Salt R. bottom	617	
8	North perimeter fence along 91 st Ave., north of admin. Bldg.	1741	09/26/03
2	Between Cobble Site Basins 1 & 2	210	
3	South fence line at Research Site	110	
5	East of Hayfield Site in Salt R. bottom	352	
8	North perimeter fence along 91 st Ave., north of admin. Bldg.	221	
10	North bank of Salt R. and 83 rd Ave.	235	10/02/03
10	North bank of Salt R. and 83 rd Ave.	294	
10	North bank of Salt R. and 83 rd Ave.	124	
5	East of Hayfield Site in Salt R. bottom	132	10/30/03

ADULT MOSQUITO TRAP LOCATION KEY

- TRAP 01: North of effluent channel, approximately 500 feet downstream of 91st Avenue
- TRAP 02: Between Cobble Site Basins C1 and C2
- TRAP 03: South fence-line at Research Site
- TRAP 04: Picnic table area on east side of Hayfield Site
- TRAP 05: East of Hayfield Site in Salt River bottom; adjacent to Hayfield Riparian gate
- TRAP 06: North perimeter fence of Hayfield Site; 25% along Basin III flow-path
- TRAP 07: North perimeter fence line of 91st Ave. WWTP (adjacent to Stump property)
- TRAP 08: Northeast perimeter fence along 91st Avenue, north of Administration Building
- TRAP 09: Hayfield riparian area adjacent to Boy Scout bridge
- TRAP 10: North bank of Salt River and 83rd Avenue

Map 1 Proposed Pest Abatement District of Maricopa County Tres Rios Adult Mosquito Trap Sites



Key

- ▲ Tres Rios Mosquito Trap Locations
- ▭ Proposed District Boundary

HOLLY ACRES MOSQUITO MONITORING SUMMARY

Jul-Dec 2003

Trap	Site description	Count	Date
14	Dirt road between Southern and Gila River	125	07/03/03
20	200 yards east of 91st Ave on Broadway (south)	1863	
13	Gila River, due south of 11249 W. Southern	205	07/10/03
20	200 yards east of 91st Ave on Broadway (south)	250	
13	Gila River, due south of 11249 W. Southern	3728	
14	Dirt road between Southern and Gila River	520	07/15/03
17	6202 N 122nd Ave	1975	
20	200 yards east of 91st Ave on Broadway (south)	305	
13	Gila River, due south of 11249 W. Southern	434	07/31/03
13	Gila River, due south of 11249 W. Southern	425	08/07/03
13	Gila River, due south of 11249 W. Southern	480	08/14/03
20	200 yards east of 91st Ave on Broadway (south)	2550	
15	11249 W. Southern	1600	
17	6202 N 122nd Ave	230	08/21/03
20	200 yards east of 91st Ave on Broadway (south)	15000	
13	Gila River, due south of 11249 W. Southern	1450	
15	11249 W. Southern	165	
17	6202 N 122nd Ave	138	08/28/03
20	200 yards east of 91st Ave on Broadway (south)	550	
13	Gila River, due south of 11249 W. Southern	480	
17	6202 N 122nd Ave	114	09/04/03
20	200 yards east of 91st Ave on Broadway (south)	325	
20	200 yards east of 91st Ave on Broadway (south)	205	09/11/03
13	Gila River, due south of 11249 W. Southern	315	09/18/03
20	200 yards east of 91st Ave on Broadway (south)	17000	
20	200 yards east of 91st Ave on Broadway (south)	675	09/25/03
20	200 yards east of 91st Ave on Broadway (south)	124	10/02/03

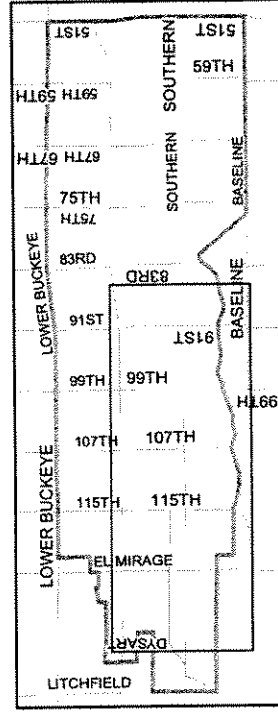
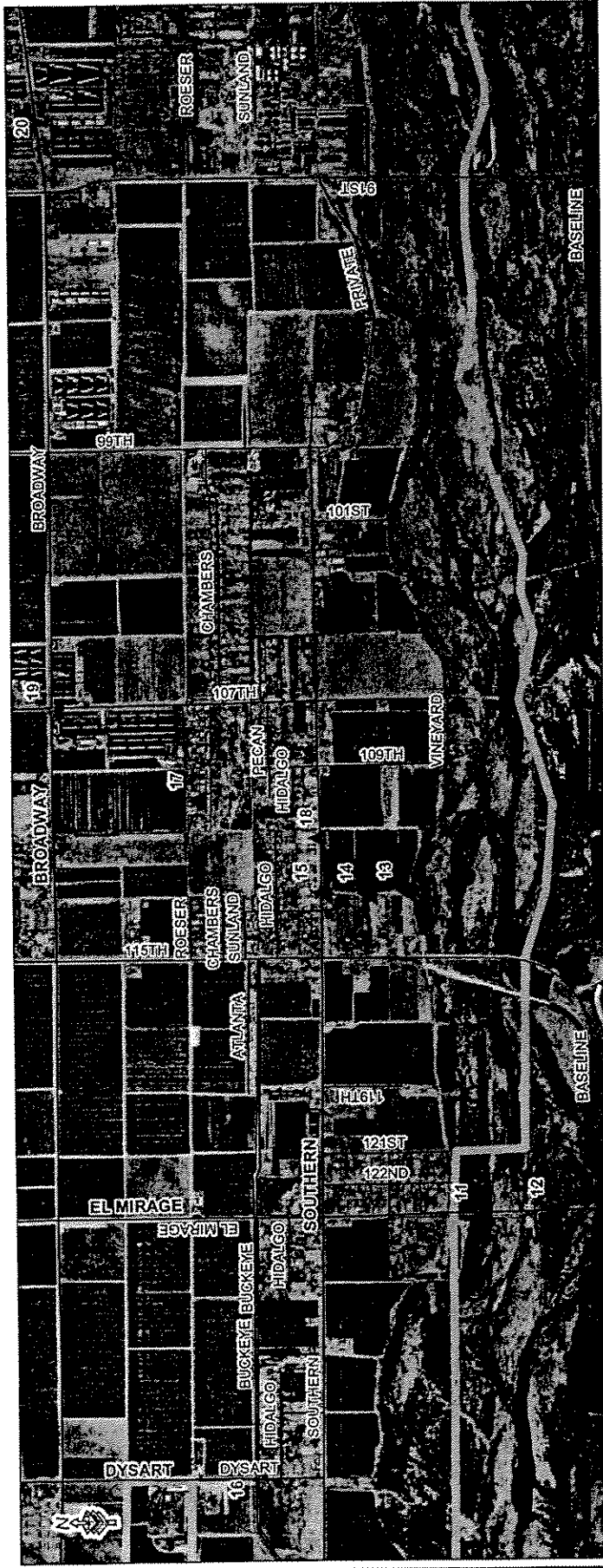
Table 1. Holly Acres Mosquito Trap Sites (Updated)

11. River bed at El Mirage north side of river
12. River bed at El Mirage south side of river
13. Gila River due south of 11249 W. Southern
14. On dirt road (11249 W. Southern) half way between Southern and Gila River
15. Tree at 11249 W. Southern
16. NE corner of Dysart and Southern (behind horse stables next to canal)
17. 110th Avenue and Roeser, second house on left
18. 11102 W. Southern (tree on side of house)
19. SW corner of 107th Ave and Broadway (tree)
20. 200 yards east of 91st Ave on Broadway (South side of road in trees)

**Holly Acres Trap GPS Points
(Updated)**

Trap #	Latitude	longitude
11	33.22.989	112.19.384
12	33.22.745	112.19.369
13	33.23.228	112.18.104
14	33.23.354	112.18.114
15	33.23.501	112.18.110
16	33.23.725	112.20.393
17	33.23.908	112.17.739
18	33.23.513	112.17.891
19	33.24.371	112.17.377
20	33.24.391	112.15.601

Map 2 Proposed Pest Abatement District of Maricopa County Holly Acres Adult Mosquito Trap Sites



Key

▲ Holly Acres Mosquito Trap Locations

▭ Proposed District Boundary

EXHIBIT F

**MOSQUITO MONITORING SUMMARY REPORT
JANUARY 2004 – JUNE 2004**

TRES RIOS DEMONSTRATION CONSTRUCTED WETLAND

MOSQUITO MONITORING SUMMARY REPORT JANUARY- JUNE 2004

Site No.	Description	Count	Date
4	Picnic table east side of Hayfield Site	268	03/26/04
5	East of Hayfield Site in Salt R. bottom	127	
10	North bank of Salt R. and 83 rd Ave.	108	
10	North bank of Salt R. and 83 rd Ave.	130	04/02/04
4	Picnic table east side of Hayfield Site	112	04/09/04
5	East of Hayfield Site in Salt R. bottom	137	
10	North bank of Salt R. and 83 rd Ave.	202	
2	Between Cobble Site Basins 1 & 2	103	04/30/04
10	North bank of Salt R. and 83 rd Ave.	128	
4	Picnic table east side of Hayfield Site	128	05/06/04
5	East of Hayfield Site in Salt R. bottom	121	
4	Picnic table east side of Hayfield Site	227	05/14/04
4	Picnic table east side of Hayfield Site	147	05/27/04
4	Picnic table east side of Hayfield Site	338	06/03/04
5	East of Hayfield Site in Salt R. bottom	119	
9	Hayfield Site riparian area adjacent to Boy Scout bridge	149	
4	Picnic table east side of Hayfield Site	235	06/10/04
5	East of Hayfield Site in Salt R. bottom	104	
4	Picnic table east side of Hayfield Site	431	06/17/04
5	East of Hayfield Site in Salt R. bottom	161	
9	Hayfield Site riparian area adjacent to Boy Scout bridge	125	

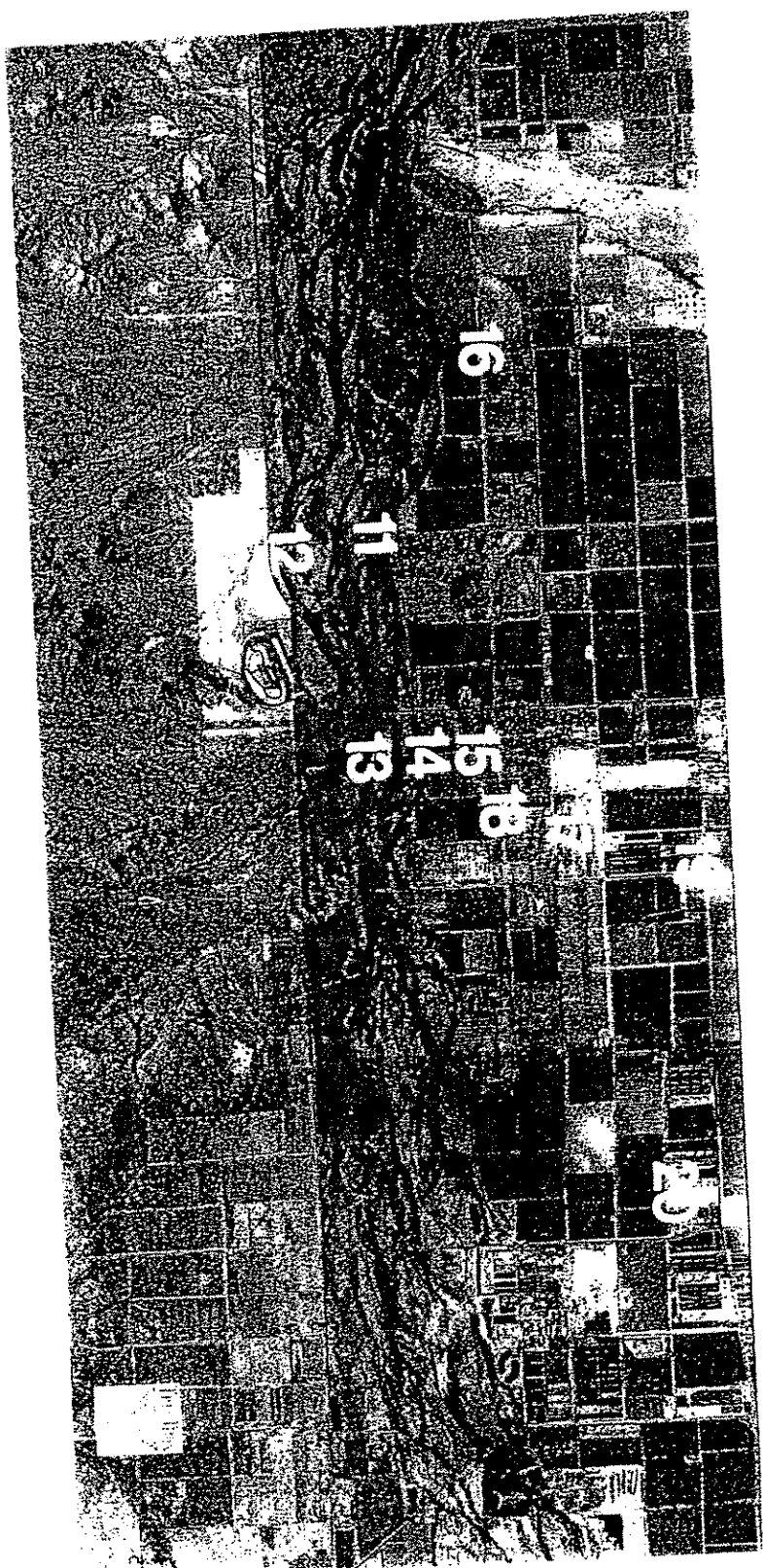
ADULT MOSQUITO TRAP LOCATION KEY

- TRAP 01: North of effluent channel, approximately 500 feet downstream of 91st Avenue
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- TRAP 07: North perimeter fence line of 91st Ave. WWTP (adjacent to Stump property)
- TRAP 08: Northeast perimeter fence along 91st Avenue, north of Administration Building
- TRAP 09: Hayfield riparian area adjacent to Boy Scout bridge
- TRAP 10: North bank of Salt River and 83rd Avenue

HOLLY ACRES MOSQUITO MONITORING SUMMARY

JANUARY- JUNE 2004

Trap	Site description	Count	Visit Date
17	110 th Avenue and Roeser	93	04/27/04
13	Gila River, due south of 11249 W. Southern	58	05/13/04
13	Gila River, due south of 11249 W. Southern	107	05/20/04
17	110 th Avenue	96	
20	200 yards east of 91st Ave on Broadway (south)	95	
17	110 th Avenue	65	05/26/04
20	200 yards east of 91st Ave on Broadway (south)	97	06/10/04
13	Gila River, due south of 11249 W. Southern	98	06/17/04
20	200 yards east of 91st Ave on Broadway (south)	85	
13	Gila River, due south of 11249 W. Southern	85	06/24/04



Holly Acres Mosquito Trap Sites (Updated)

11. River bed at El Mirage north side of river
12. River bed at El Mirage south side of river
13. Gila River due south of 11249 W. Southern
14. On dirt road (11249 W. Southern) half way between Southern and Gila River
15. Tree at 11249 W. Southern
16. NE corner of Dysard and Southern (barned horse clothes used to grow)
17. 110th Avenue and Rowley (several houses on left)
18. 11142 W. Southern (iron on side of house)
19. SW corner of 110th Avenue and Rowley (tree)
20. Right grade road of 11th Avenue (Buck's Bakery) (south side of road)

Table 1. Holly Acres Mosquito Trap Sites (Updated)

11. River bed at El Mirage north side of river
12. River bed at El Mirage south side of river
13. Gila River due south of 11249 W. Southern
14. On dirt road (11249 W. Southern) half way between Southern and Gila River
15. Tree at 11249 W. Southern
16. NE corner of Dysart and Southern (behind horse stables next to canal)
17. 110th Avenue and Roeser, second house on left
18. 11102 W. Southern (tree on side of house)
19. SW corner of 107th Ave and Broadway (tree)
20. 200 yards east of 91st Ave on Broadway (South side of road in trees)

**Holly Acres Trap GPS Points
(Updated)**

Trap #	Latitude	longitude
11	33.22.989	112.19.384
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16	33.23.725	112.20.393
17	33.23.908	112.17.739
18	33.23.513	112.17.891
19	33.24.371	112.17.377
20	33.24.391	112.15.601

EXHIBIT G
BIOLOGY OF DOMESTIC FLIES

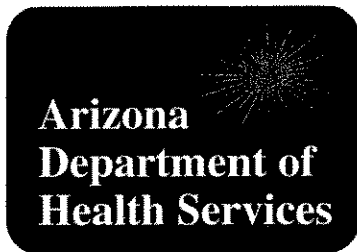
Table 1. BIOLOGY OF DOMESTIC FLIES

SPECIES	LIFE CYCLE	ADULT OCCURRENCE	PREFERRED HOST MATERIAL
House Fly <u>Musca domestica</u>	200-2000 eggs per female. egg to adult in 7 to 45 days.	Prefer warm but not too hot weather. May occur year round but most abundant in Sept. and Oct.	Larvae usually occur in man-made sources, animal waste, culled fruits and vegetables are preferred
Little House Fly <u>Fannia canicularis</u>	180-560 eggs per female. Egg to adult in 18 to 24 days.	Males typically hover in protected locations such as garages, porches and inside houses. Less abundant during summer and winter.	Larvae develop in almost all kinds of decaying organic matter. Chicken manure is usually the source of large infestations. Other types of manure also favored.
Green Blow Fly <u>Phaenicia</u> (2 species)	3000 eggs per female. Egg to adult in 9 to 18 days.	Frequently most common flies in urban situation. Common during summer months.	Garbage cans are a common source during summer months. Dog droppings also preferred.
Blue Blow Fly <u>Eucailliphora</u> and <u>Calliphora</u>	500-700 eggs per female. Egg to adult in 15 to 21 days.	Usually the first type of fly to appear in the spring.	Decaying carcasses of birds and mammals. Also found in garbage dumps.

SPECIES	LIFE CYCLE	ADULT OCCURRENCE	PREFERRED HOST MATERIAL
Black Blow Fly <u>Phormia regina</u>	200-400 eggs per female. Egg to adult in 10 to 25 days.	Most common blow fly in wild areas. Active in relatively cool temperatures in spring and summer.	Decaying carcasses. Also lays eggs in open wound of animals.
Stable Fly <u>Stomoxys calcitrans</u>	200-400 eggs per female. Egg to adult in 13 to 40 days.	Common around dairies. Occasionally attracted to and bite dogs in large enough numbers to be a problem.	Manure, especially when mixed with straw. Lawn clippings and animal feed waste also preferred.
Vinegar Flies <u>Drosophila</u> (several species)	400-1000 eggs per female. Egg to adult in 8 to 11 days.	Most abundant around larval source and during fall, but can be present year round.	Larvae found in decaying fruit and vegetables. Garbage cans frequent source.
False Stable Fly <u>Muscina stabulans</u>	140-220 eggs per female. Egg to adult in 15 to 30 days.	Most abundant in early spring prior to peak house fly emergence. Occur in many situations.	Manure and decaying plant waste such as culled fruit.
Flesh Flies (several genera)	Female deposits 30 to 60 larvae instead of eggs. Eggs held in female until they hatch. Larvae to adult in 8 to 18 days.	Year round, more common in warm months.	Garbage cans, manure (especially untrampled), animal carcasses including snails.

EXHIBIT H

**CERTIFICATIONS OF THE ARIZONA DEPARTMENT OF HEALTH SERVICES AND
THE MARICOPA COUNTY, ARIZONA DEPARTMENT OF PUBLIC HEALTH**



Division of Public Health Services

Office of the Assistant Director

Public Health Preparedness Services

150 N. 18th Avenue, Suite 140

Phoenix, Arizona 85007

(602) 364-4562

(602) 364-3198 FAX

JANET NAPOLITANO, GOVERNOR

CATHERINE R. EDEN, DIRECTOR

February 2, 2005

Ms. Fran McCarroll
Maricopa County Board of Supervisors
301 West Jefferson Street, 10th Floor
Phoenix, Arizona 85003

Dear Ms. McCarroll:

This is in response to a letter from Amy Hinderer-Feltus, dated January 28, 2005, requesting a letter verifying the presence of mosquito pests within the boundaries of the proposed pest abatement district in the West Valley. As I understand, the district will encompass that portion of Maricopa County bordered to the north by Lower Buckeye Road, to the south by Elliot Road, to the west by Litchfield Road, and to the east by 51st Avenue. Based on many years of surveillance data gathered in the area, I can verify that this area does indeed contain a variety of mosquito species, including potential vectors of encephalitis viruses (ex. *Culex tarsalis* and *Cx. quinquefasciatus*) and nuisance species, which breed in enormous numbers in flooded habitats (*Psorophora columbiae* and *Aedes vexans*).

All of these species can pose a significant nuisance during much of the year. However, the *Culex* species are of greatest concern, as they are efficient vectors (transmitters) of mosquito-borne viruses such as St. Louis encephalitis (SLE), western equine encephalitis (WEE), and West Nile virus (WNV). All three viruses have been detected in the West Valley. The area within the proposed district is rich with potential mosquito breeding habitats, including natural wetlands within the Salt and Gila River basins, agricultural tail waters, pooling in irrigation ditches, backyard containers/clutter, and man-made wetlands. The area in question would benefit greatly from the formation of a pest abatement district.

If you have any questions regarding mosquitoes, feel free to call me at (602) 364-4562.

Sincerely,

A handwritten signature in black ink that reads "Craig Levy". The signature is fluid and cursive, with the first name "Craig" being more prominent than the last name "Levy".

Craig Levy
Program Manager
Vector-Borne Zoonotic Disease Services
Office of Infectious Disease Services

CEL:cjw



Maricopa County

Department of Public Health

4041 N. Central Ave. # 1400
Phoenix, Arizona 85012
Phone: (602) 506-6900
Fax: (602) 506-6885

December 21, 2005

Amy Hinderer Feltus
Squire, Sanders & Dempsey L.L.P.
40 North Central Avenue, Suite 2700
Phoenix, AZ 85004

Dear Ms. Hinderer Feltus:

This letter is in response to your e-mail of June 15, 2005 requesting a letter verifying that the pests cited in the petition have, or threaten, to invade the proposed pest abatement district.

The Vector Control staff of Environmental Services and I have reviewed the proposed pest abatement district, which encompasses that portion of Maricopa County bordered on the north by Lower Buckeye Road, on the south by Baseline Road, on the west by Litchfield Road, and on the east by 51st Avenue.

The review of the surveillance data of that area verifies that this area does indeed contain a variety of mosquito species, including potential vectors of encephalitis viruses (ex. *Culex tarsalis* and *Cx. quinquefasciatus*) and nuisance species (*Psorophora columbiae* and *Aedes vexans*). All of these species can pose a nuisance during much of the year.

Our greatest concern is for the *Culex* species because they are efficient vectors (transmitters) of mosquito-borne viruses that include St. Louis encephalitis (SLE), western equine encephalitis (WEE), and West Nile Virus (WNV). SLE, WEE and WNV have been identified within the proposed district during the past year's surveillance.

Our review of the area within the proposed district shows many potential mosquito breeding habitats, including natural wetlands, agricultural tail waters, pooling in irrigation ditches, and backyard containers.

Creation of this pest abatement district would benefit the area.

If you have any further questions regarding mosquitoes, please contact Mr. John Townsend, Vector Control Manager, Department of Environmental Services at 602-506-0703 or 602-448-4116.

Sincerely,

A handwritten signature in black ink that reads "Jacquelyn A. Meeks".

Jacquelyn Meeks, DrPH
Director
Maricopa County Department of Public Health